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Federal Funding's Unique Role in Appalachia

Rural Appalachia received relatively low levels of Federal funds in fiscal year 1997 compared with urban Appalachia. Although it had relatively high income support payments, reflecting high rates of poverty and unemployment, rural Appalachia received less per capita in Federal funding for community resources and other programs that create jobs and development. Mining and poverty counties were the chief rural beneficiaries of income support payments, while the more populous and prosperous rural manufacturing and commuting areas benefited more from community resource programs. Some Federal policy trends may further the region's growth, particularly the recent increase in highway aid and changes in telecommunications, while environmental policy, welfare reform, and proposals to reduce or limit the growth of income support and economic development programs present challenges to the region.

The Federal Government's role in rural America varies by place and region, reflecting the diversity of rural America. In our last article on this topic (Reeder, Bagi, and Calhoun, 1998), we showed that the rural Great Plains, the Nation's breadbasket, relied heavily on agricultural programs. In Appalachia, with its low-wage manufacturing and mining industries and high levels of poverty and unemployment, more Federal assistance in rural areas goes to income support programs.

In this article, we use census data to examine the pattern of Federal funding in Appalachia in fiscal year 1997. By comparing Appalachia with the Nation as a whole, we show which programs are important to the region. The Appalachian Regional Commission (ARC) and the Tennessee Valley Authority (TVA) are Federal institutions unique to the region, so they receive particular attention. We conclude with some observations on recent Federal policy trends that have particular bearing on Appalachia.

Rural Appalachia Gets Relatively Low Amounts of Federal Funds

Over the years, Appalachia has received much attention for its geographic isolation, poverty, unemployment, and low education levels. These difficulties have attracted some unique forms of supplemental Federal assistance, such as the ARC and TVA programs, plus some more general assistance targeted to distressed areas and individuals nationwide. The region's effective representation in Congress has also attracted various Federal projects and installations to Appalachia.

Census data for fiscal year 1997 indicate that Appalachia's urban (metro) areas received $5,677 in Federal funds, per capita, 6.5 percent more than urban areas nationwide (table 1). However, Appalachia as a whole received $5,243, 0.5 percent more than the entire United States. Appalachia has a large rural population (45 percent of its population resides in nonmetro counties, compared with 20 percent nationwide), and rural Appalachia received 10.6 percent less in Federal funds per capita ($4,720) than the Nation as a whole, and 1.1 percent less than rural areas nationwide. The resulting difference in funding between urban and rural areas is larger in Appalachia (17 percent) than it is nationwide (11 percent).

Whether this differential represents a hardship for rural Appalachia depends to some extent on the type of funding received. Funding that goes mainly to individuals—such as medical, retirement, and unemployment benefits—primarily benefits the place where the funds go. However, funding that pays for infrastructure or provides employment and training may also benefit those who commute from surrounding areas. Thus, the concentra-

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Table 1

Per capita Federal funds by function, fiscal year 1997

Rural Appalachia received less funding, per capita, than urban Appalachia and the Nation as a whole

County type	All Federal funds	Agriculture and natural resources	Community resources	Defense and space	Human resources	Income security	National functions
				Dollars per person			
United States	5,218	59	508	645	101	3,138	767
Metro	5,333	18	549	734	98	3,089	845
Nonmetro	4,768	224	349	294	113	3,329	458
Appalachia	5,243	17	314	194	102	3,818	799
Metro	5,677	12	359	247	91	3,921	1,047
Nonmetro	4,720	22	260	130	115	3,694	499
By economic county types:							
Mining-dependent	5,358	13	197	140	147	4,209	652
Manufacturing-dependent	4,434	27	258	148	96	3,470	435
Government-dependent	4,374	44	252	106	119	3,264	588
Services-dependent	4,927	12	277	166	116	3,985	372
Nonspecialized	4,511	23	325	60	113	3,438	554
By policy county types:							
Retirement-destination	4,440	7	202	263	80	3,646	242
Federal lands	4,270	10	271	92	87	3,429	381
Commuting	4,114	30	294	54	102	3,292	373
Persistent-poverty	5,276	16	293	130	168	4,064	605

Note: Individual figures may not sum to total because of rounding.
There were only three counties in Appalachia classified as farming-dependent, so this economic type was excluded from this table; transfer payment policy type was also excluded, because of significant overlap with the poverty county type.

Source: Calculated by ERS using Federal funds data from the Bureau of the Census.

tion of some types of assistance in metro areas may benefit both rural and urban areas in the region.

Looking at per capita funding variation by function, we found that both metro and nonmetro areas in Appalachia received relatively high amounts for income security and national functions, including criminal justice, law enforcement, energy, higher education, and research. Income security—which includes medical, retirement, disability, public assistance, and unemployment benefits—is the predominant type of Federal assistance, accounting for 60 percent of Federal funds nationwide. Given the region's relatively high rates of poverty and unemployment, we expected—and found—that income security accounted for a relatively large share (73 percent) of Federal funding. Although about 6 percent more income security funds, per capita, went to metro areas than nonmetro areas, this urban funding advantage was much smaller than that observed for most other forms of assistance.

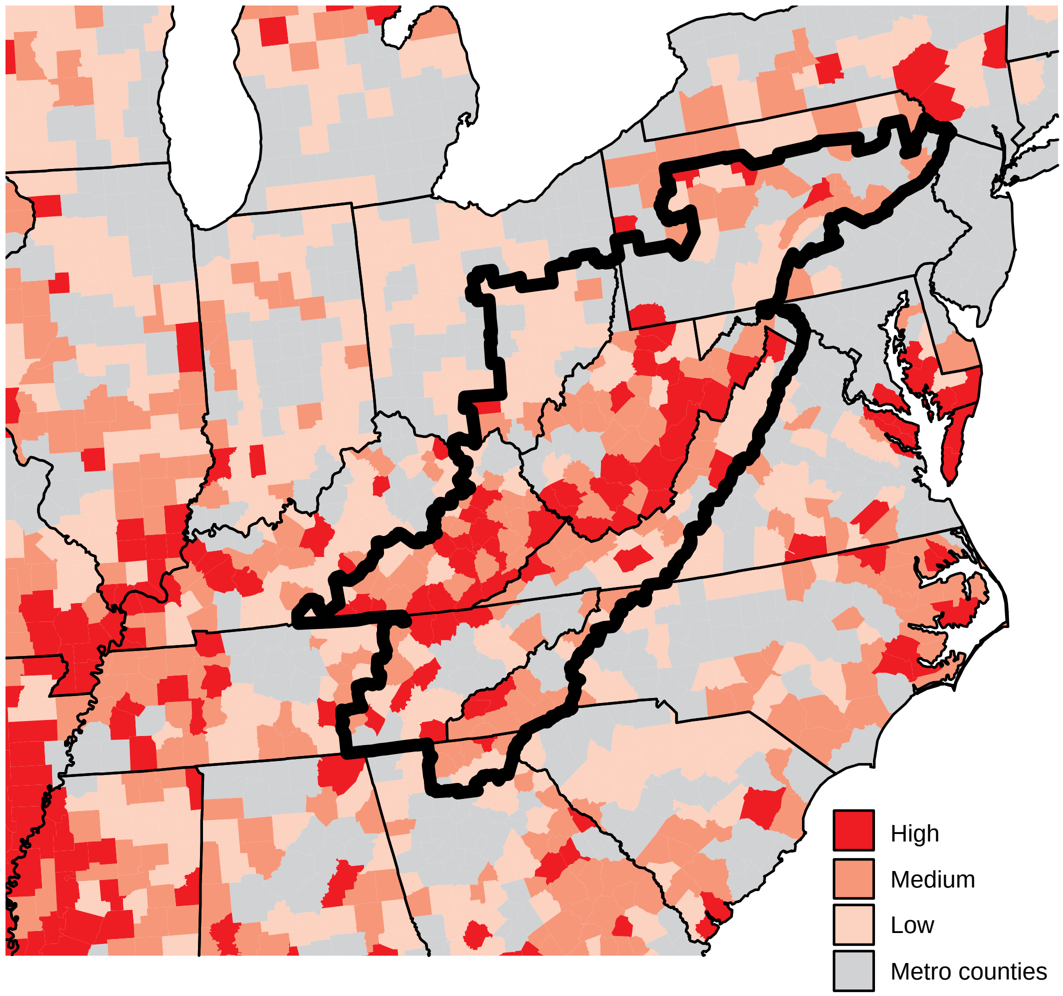
National functions accounted for a relatively large amount of funding in Appalachia, perhaps indicating superior congressional pull in placing Federal projects and installations in the region. Urban Appalachia got twice as much of these funds, per capita, as did rural Appalachia. But these facilities may provide employment and income for commuters from surrounding areas, so the urban-rural gap in benefits received may be smaller than this. Appalachia (both urban and rural) received relatively low amounts for community resources, defense and space, and agricultural and natural resources (see "Data and Definitions"). Rural Appalachia got a little more than urban Appalachia in agriculture and natural resources funding, but the amounts involved were small—$22 per capita, rural, and $12 per capita, urban. In contrast, urban Appalachia received substantially more in both community resources and defense and space funds than did rural Appalachia. Both of these categories of funding are important to local economies because they provide infrastructure and jobs. But the urban-rural funding gaps may again overstate the differences in benefits received where rural residents share from the benefits of federally subsidized urban development.

Federal Funding Varies Across County Types Within Rural Appalachia

Coal and poverty are at the core of central Appalachia; a dark streak runs through the center of West Virginia and eastern Kentucky. This area receives relatively high levels of Federal funding (fig. 1). Among the region's nonmetro counties, mining-dependent counties received the highest per capita Federal funding ($5,358) (see Cook and Mizer for an explanation of county types). Most of the funding advantage for the mining-dependent counties comes from Federal payments for income security ($4,209) and national functions ($652).

Mining counties account for only one-fifth of the nonmetro residents in Appalachia. More populous are the region's manufacturing-dependent counties, which contain 38 percent of Appalachia's nonmetro population. Most manufacturing counties are located in the South (Tennessee) and in counties along the eastern and north-

Figure 1
Per capita Federal funds, fiscal year 1997
Central part of Appalachian counties received the highest funding



Note: Outlined counties represent Appalachia as defined by Bogue and Beale. High, medium, and low correspond to the top third, middle third, and bottom third of nonmetro counties nationwide. High was $4,855 or more per person and low was $3,802 or less per person.

Source: Calculated by ERS using Federal Funds data from the Bureau of the Census.

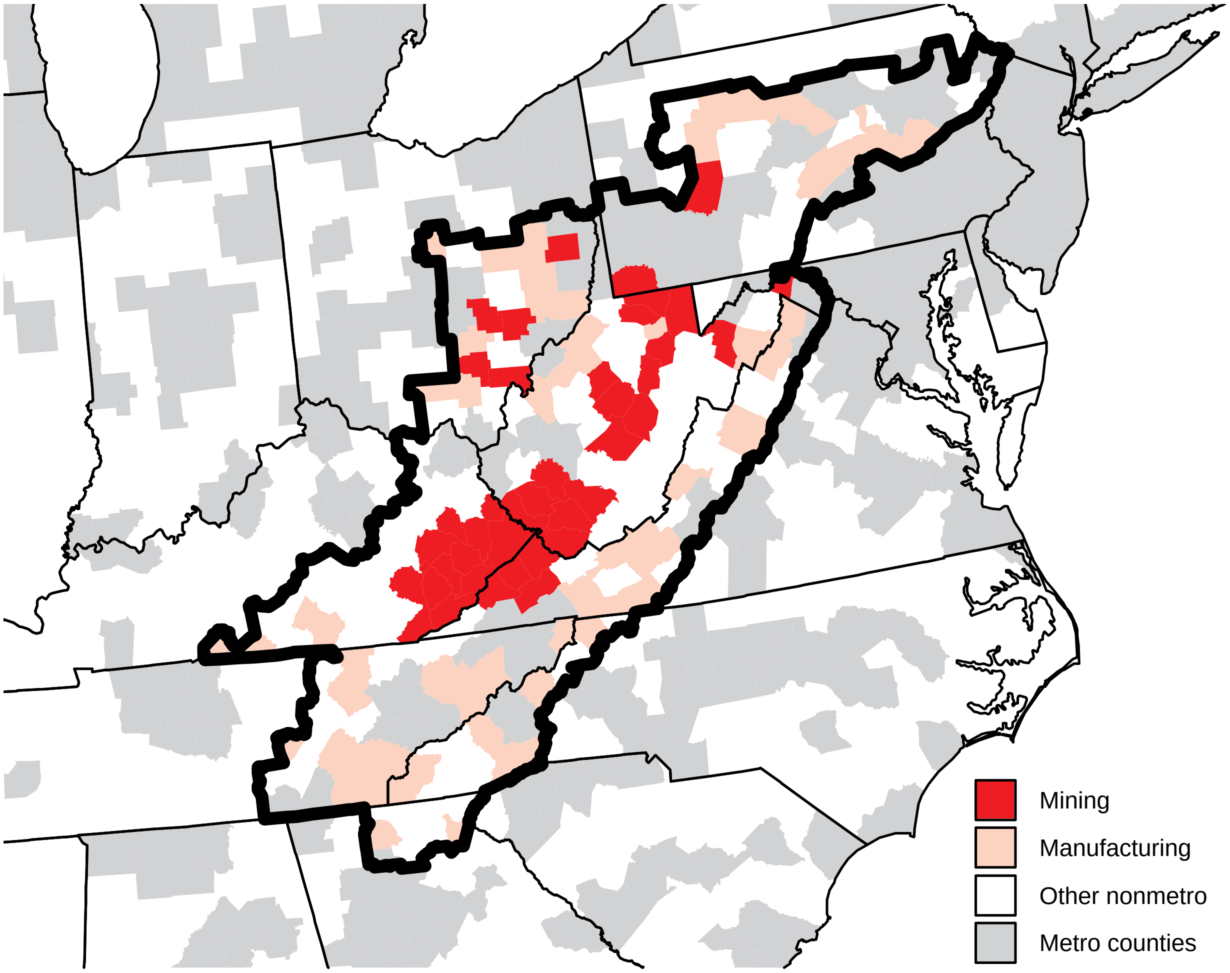
western edges of the region (fig. 2). Despite or perhaps because of their economic importance to the region, these counties get relatively low levels of Federal funds, $4,434 per capita. These places tend to have more jobs and income, probably reducing their need for income security funds, which account for most of their funding difference.

ERS's policy typology identifies nonmetro counties that are particularly affected by specific policies, including persistent-poverty, retirement-destination, commuting, and Federal lands counties. Among these policy types, persistent-poverty counties received the highest level of Federal assistance. However, they got significantly less funding than metro counties, benefiting mainly from their relatively high income security payments and, to a lesser extent, from relatively high human resources aid. Federal lands, commuting, and retirement counties—which tend to be located along the outer edges of Appalachia—received less per capita, with the lowest funding in commuting counties whose residents are likely to benefit from federally subsidized activities in nearby metro counties.

ARC and TVA: Unique Federal Institutions That Benefit Appalachia

Recognizing that Appalachia's few basic industries failed to provide the kind of economic base needed for self-sustaining growth and prosperity for its people, Congress created the Appalachian Regional Commission (ARC) in 1965 "to assist the region in meeting its special problems, to promote its economic development, and to establish a framework for joint Federal and State efforts toward providing basic facilities essential to its growth...on a coordinated and concerted regional basis." The 1965 Act (P.L.

Figure 2
Appalachian county types, 1993
Mining was predominantly in central Appalachia; manufacturing counties were located along the region's borders



Note: See "Data and Definitions" for an explanation of county types.
Source: ERS county typologies, from *The Revised ERS County Typology: An Overview* by Cook and Mizer, 1994.

89-4) went on to require that ARC concentrate its investments "in areas where there is a significant potential for future growth and where the expected return on public dollars invested will be greatest" and envisioned that as the region's physical infrastructure, transportation, and human resources improved, a strengthened and more diversified private sector would result that would allow the region to support itself.

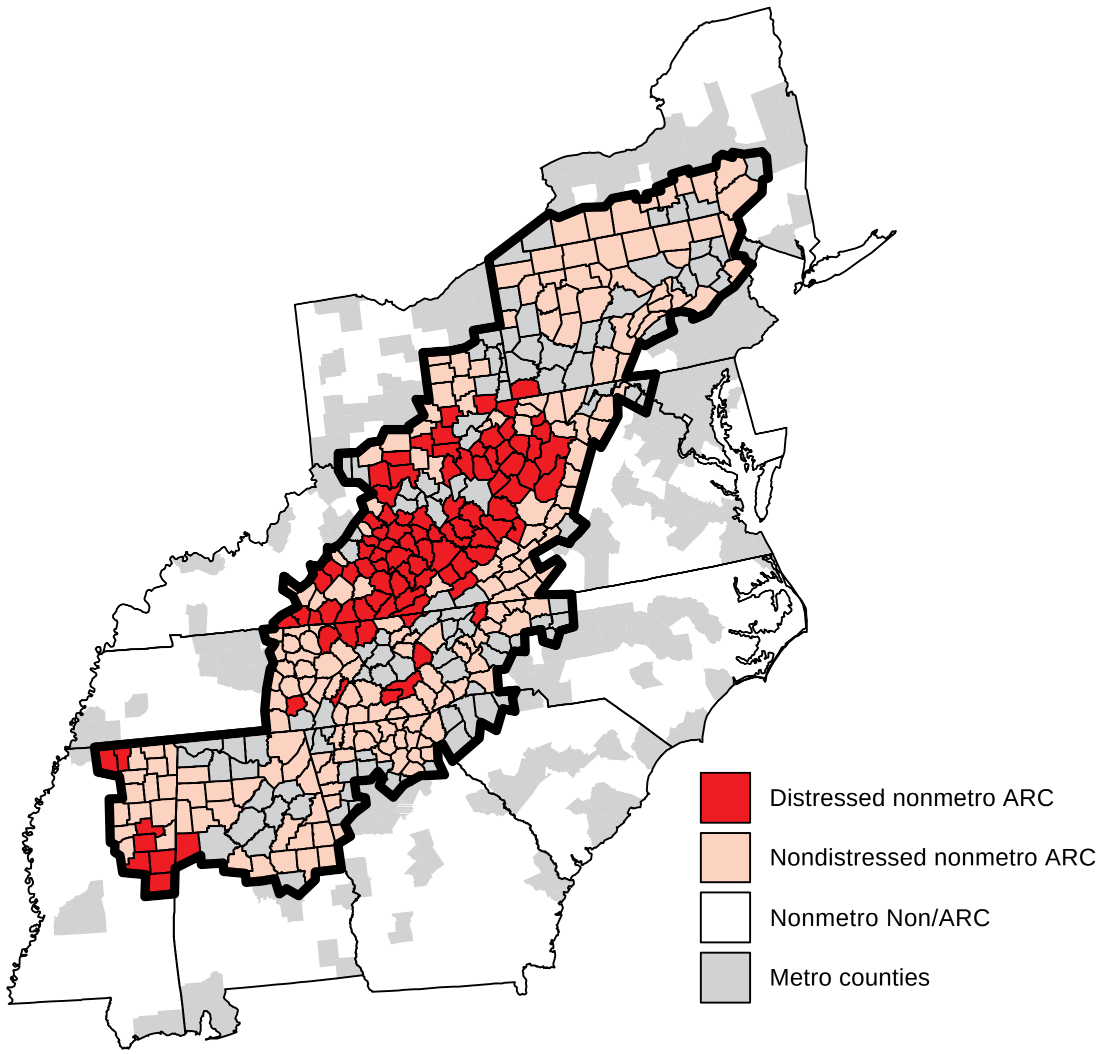
Compared with some other Federal agencies, ARC's Federal funding is small ($170 million in fiscal year 1998), but this understates its importance. ARC funding is relatively flexible, allowing it to be used as "first money" that leverages other investment, including other Federal assistance. ARC also funds local planning, leadership, and technical assistance. For rural areas lacking sufficient resources to effectively plan for economic development, such funding can be critical in initiating local development projects. Local planning is undertaken through ARC's Local Development Districts, which cover multi-county areas, economizing on planning costs and facilitating coordinated regional strategies. A recent evaluation concluded that ARC-assisted places significantly outperformed similar places elsewhere in the country (Isserman and Rephann).

ARC provides supplementary funds that benefit only Appalachia's most "distressed" counties— those with relatively high poverty and unemployment rates and low incomes (fig. 3). "Transitional" counties, which have less distress but still need to improve conditions, receive less ARC assistance. The remaining "attainment" and "competitive" counties receive little or no ARC assistance. Comparing figure 1 with figure 3 reveals that many distressed counties receive relatively high amounts of total Federal spending. This pattern probably owes something

Figure 3

Counties receiving assistance from the Appalachian Regional Commission (ARC)

Distressed counties receive particular assistance



Note: Distressed counties have at least 150 percent of the U.S. unemployment rate (9.3 percent), 150 percent of the U.S. poverty rate (19.7 percent), and less than 67 percent of the U.S. per capita market income ($12,074) or 200 percent poverty and one other indicator.

Source: ERS calculation using data from the Appalachian Regional Commission.

to the ARC program, as well as the fact that these places get a lot of income support payments. But despite the ARC's distress-targeted assistance, many distressed counties in the western portion of Appalachia received relatively low amounts of Federal funds in 1996. In addition, State differences are important, as some State borders (such as West Virginia's southern and eastern border) are clearly visible in the pattern of assistance (fig. 1) and they are not obviously explained by the pattern of distress (fig. 3). The reason for this is not clear, but it may reflect more aggressive representation in Congress, or perhaps more aggressive State economic development policy in applying for Federal grants in West Virginia.

ARC's boundaries encompass a substantially larger area than what is conventionally known as Appalachia, including portions of Mississippi, Alabama, and South Carolina in the South and parts of New York and Pennsylvania in the North. ARC funding, broken out by State and assistance type, is shown in table 2. Highway projects entail the largest amount of funding, reflecting the high cost of highway construction in mountainous areas and ARC's emphasis on the highway system as critical to the region's economic development strategy. The most recent ARC initiative, however, assists local entrepreneurs in forming home-grown businesses.

Another Federal institution unique to the region is the Tennessee Valley Authority (TVA). The TVA was created during the Great Depression to develop a part of Appalachia covering the Tennessee River Valley, including significant portions of Tennessee, Mississippi, Alabama, and Kentucky, as well as some fringe parts of Georgia, North Carolina, and Virginia. But where ARC has focused on highways and related development, TVA has focused on the waterways, including electric power, flood control, environmental protection, and amenity development.

TVA's 1998 budget of $6.4 billion is substantially larger than ARC's, but most of this money comes from, and is spent on, TVA's electric power operations. TVA's Federal funds appropriation was only $70 million in 1998. This money covers the nonpower programs, including water and land stewardship ($60 million), the Environmental Research Center ($3 million) for cleanup efforts, and the Land Between the Lakes National Recreation Area ($7 million). However, appropriations legislation for 1999 reduced Federal funds for the nonpower programs to $50 million; hence, funding will have to come from other sources to maintain program levels.

Although TVA's importance to the region has been significant in many respects, it has received mixed reviews over the years (Webber; Freshwater et al.). The Tennessee River Valley portion of Appalachia appears less economically distressed than the parts of Appalachia that border to its north, and it appears to require less Federal funds (figs. 1 and 2). Whether this is a result of TVA's activities or other factors, such as a more favorable climate, is unclear.

Federal Policy Trends Affecting Appalachia

Several policy developments might be expected to significantly affect the region. Among these are the trends toward increasingly stringent environmental regulations, electric and telecommunications deregulation, welfare reform, increased highway aid, and increased pressure to cut back on the growth of domestic assistance programs.

More stringent environmental regulations proposed for air and water present challenges and opportunities for the region. Much of the region's population and industry reside near rivers and lakes that must be kept clean, but this sometimes comes at a high cost and could be a burden for some of the region's industries and communities. More stringent requirements for air pollution might pose additional problems for some places. Recent increases in environmental spending help, but it is unclear whether they can be maintained long enough to meet local fiscal demands. On the plus side, a cleaner environment might help many Appalachian communities maintain the natural amenities that attract so many tourists and residents to the area.

The proposed electric deregulation might reduce the extent to which the region benefits from its hydroelectric power sources. Deregulation is expected to create more uniform rates nationwide; hence, higher rates might be expected in those parts of Appalachia where rates are now low. For example, with the recent reduction in Federal funding for TVA's nonpower programs, if those programs are to continue they may have to be funded in part through increased TVA electric rates, and TVA's power facilities might also be privatized, resulting in reduced Federal funding in the region.

Major regulatory changes have already begun in telecommunications, which may significantly benefit the region by expanding services to further reduce isolation in Appalachia. The universal service provisions of the Telecommunications Act of 1996 may be particularly beneficial to rural areas in the region by subsidizing telecommunications in high-cost areas, especially for schools, libraries, and health-care facilities. However, it is unclear

Table 2

ARC funding, by State and funding type, fiscal year 1996

The ARC budget emphasized highways, though funding varied from State to State

	Final fiscal year 1996 allocations					
State	Highway funds	Area development	Distressed counties	Regional initiatives	Local development districts	Totals[1]
	Thousand dollars					
Alabama	9,543	2,816	951	396	413	14,119
Georgia	5,446	2,071	0	317	338	8,172
Kentucky	12,281	2,841	4,321	398	507	20,348
Maryland	2,586	1,361	0	244	110	4,301
Mississippi	2,784	1,801	1,261	289	240	6,375
New York	4,757	2,071	0	317	243	7,388
North Carolina	9,213	2,332	237	345	366	12,493
Ohio	7,693	2,222	1,277	333	253	11,778
Pennsylvania	17,775	4,058	458	526	516	23,333
South Carolina	1,283	2,100	0	320	158	3,861
Tennessee	16,236	2,973	843	412	363	20,827
Virginia	4,078	1,880	671	298	325	7,252
West Virginia	13,725	2,904	3,451	405	568	21,053
Total	107,400	31,430	13,470	4,600	4,400	161,300[1]

[1]Excludes $8.7 million for functions covering regional projects, administration, and technical support.
Source: Calculated by ERS using data from Appalachian Regional Commission.

Data and Definitions

Data. The Department of Commerce, Bureau of the Census, Governments Division produces Consolidated Federal Funds Reports data each year. These data, obtained from various Federal departments and agencies, reflect Federal obligations for expenditures and loans. The data for fiscal year 1997 covered 1,256 programs. (Census population estimates for calendar year 1997 were used to compute per capita amounts.)

Our analysis used the data from 816 of these programs, accounting for $1.4 trillion, or about 88 percent of the total Federal funds reported by Census. We excluded programs for which 25 percent or more of their funding nationally went to State capitals because such levels suggested pass-through funding that State governments later redistributed to local areas. We also excluded programs that reported much or all of their funding only at the State or national level because the funding cannot be traced to the county level. As a result, most of the large block grant programs involved with social services, employment, and training were excluded. This understates the amount of funding received, particularly for our "human resources" function.

Interpretations should be made with caution. In some cases, as with Medicaid, the data are based not on actual outlays that go to places, but on estimates based on other information. In other cases, like procurement, expenditures may be reported only at the location of prime contractors or primary subcontractors and ignore further subcontracting. In addition, some Federal agencies make payments to entities that provide services to multicounty areas, but the payments may be reported only to the headquarters of the multicounty entity. These data limitations may lead to an overstatement or understatement of benefits to some metro and nonmetro areas. For example, defense procurement, which we found primarily benefits metro areas and government-dependent nonmetro areas, probably involves subcontracting that disperses the benefits more broadly to some other nonmetro areas.

Definitions. In table 1, we used ERS's six broad function categories for Federal programs:

* Agriculture and natural resources (agricultural assistance, agricultural research and services, forest and land management, water and recreation resources)
* Community resources (business assistance, community facilities, community and regional development, environmental protection, housing, Native American programs, and transportation)
* Defense and space (aeronautics and space, defense contracts, defense payroll and administration)
* Human resources (elementary/secondary education, food and nutrition, health services, social services, training/employment)
* Income security (medical and hospital benefits, public assistance and unemployment compensation, retirement and disability—includes Social Security)
* National functions (criminal justice and law enforcement, energy, higher education and research, all other programs excluding insurance).

For reporting by place, we used OMB's 1993 definitions of metro and nonmetro counties and ERS's revised nonmetro county typologies. The economic county types were defined as follows (all percentages are weighted annual averages):

Farming-dependent—Farming contributed 20 percent or more of total labor and proprietor income during 1987-89.

Mining-dependent—Mining contributed 15 percent or more of total labor and proprietor income during 1987-89.

Manufacturing-dependent—Manufacturing contributed 30 percent or more of total labor and proprietor income during 1987-89.

Government-dependent—Federal, State, and local government activities contributed 25 percent or more of total labor and proprietor income during 1987-89.

Services-dependent—Service activities (private and personal services, agricultural services, wholesale and retail trade, finance and insurance, real estate, transportation, and public utilities) contributed 50 percent or more of total labor and proprietor income during 1987-89.

Nonspecialized—Counties not classified as a specialized economic type during 1987-89.

The county policy types were defined as follows:

Retirement-destination—The population age 60 and older in 1990 increased by 15 percent or more during 1980-90 through inmovement of people.

Federal lands—Federally owned lands made up 30 percent or more of a county's land in 1987.

Commuting—Workers age 16 and over commuting to jobs outside their county of residence were 40 percent or more of all the county's workers in 1990.

Persistent-poverty—Persons with poverty-level income in the preceding year were 20 percent or more of total population in each of four years: 1960, 1970, 1980, and 1990.

Transfer-dependent—Income from transfer payments contributed a weighted annual average of 25 percent or more of total personal income during 1987-89.

Because only three nonmetro counties in Appalachia were defined as farming-dependent, we excluded this economic type from our presentation; we also excluded the transfer-dependent policy type to simplify the presentation, because it overlaps significantly with the poverty county type. Hence, a few counties may not have fallen into any of the types we presented, and there were overlaps among our various policy types. For more information on how the county types were defined, see Cook and Mizer.

at this time how these regulatory changes and resulting changes in services will work out.

Welfare reform significantly affects the region because of Appalachia's generally high rates of poverty and unemployment. It particularly affects distressed, high-poverty counties, where a relatively large share of the population may have to seek employment elsewhere due to the lack of local employment opportunities. Increases in Federal training and employment assistance that came with welfare reform will help with the transition, and perhaps encourage more local development if firms respond favorably to labor force improvements.

The recent increase in Federal highway spending should benefit Appalachia, since the region's development strategy is focused on improved highways. Appalachia could particularly benefit from the $2.5 billion in newly authorized funds for the Appalachian Highway System. Southern Appalachia will benefit most from the change in the State highway funding formula, which increases funding more for the more rapidly growing States in the South and West.

However, efforts to balance the Federal budget have led to reductions or slow growth of other (nonhighway) types of Federal spending. If such efforts continue, community resources programs that provide more general economic development assistance to the region—such as ARC, Economic Development Agency (EDA), and USDA's rural development programs—might play smaller roles in the region's economy. With Federal funding of TVA's nonpower programs reduced in 1999, more of these programs will have to be paid for by TVA's power budget or some responsibilities will have to be transferred to other agencies to prevent program cutbacks. If cutbacks occur, this might particularly affect metro counties and rural manufacturing and services-dependent counties that tend to rely heavily on community programs.

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